are positioned radially around the perimeter of hub 802. In the illustrated embodiment of the invention, four fingers 803 are shown (see FIG. 12), however, the invention is not limited to any particular number of fingers. Fingers 803 are configured to rotatably support a substrate 804 at the bevel edge thereof for processing in SRD 800. The upper portion of SRD 800 includes lid member 805, which is generally dome shaped, that operates to enclose a processing space below the dome 805 and above the hub 802. Further, dome member 805 includes at least one gas nozzle 807 positioned therein that is configured to dispense a processing gas into the processing space, and a fluid manifold 806 configured to ~~dispenses~~ dispense a processing fluid therefrom onto the substrate 804 secured to the fingers 803. At least one side of the SRD 800 includes a door or opening (not shown) that may be selectively opened and closed to provide access to the processing area of SRD 800. The lower portion of SRD 800 includes an annular shield member 812 positioned around the perimeter of the basin. The shield 812 is positioned below and radially outward of the substrate support member 802, and therefore, is configured to shed fluid outwardly to the perimeter of the basin. Additionally, shield 812 is configured to be vertically actuatable, as will be further discussed herein.

CH
2/20/07

[00~~86~~78] Once the substrate is secured to the substrate support fingers 803, processing may begin. Generally, processing in cell 800 will include rinsing and drying the substrate positioned therein. The rinsing and drying processes generally includes rotating the substrate, and therefore, fingers 803 are generally secured to a rotatable-type hub 802, as illustrated in FIG. 8. Once the substrate is rotating, fluid dispensing nozzles may dispense a rinsing fluid onto the front, back, or both sides of the rotating substrate. Fluid dispensed onto the front side of the substrate may be dispensed by manifold 806 positioned in the lid member 805, while fluid ~~is~~ dispensed ~~to onto~~ on the back side of the substrate may be dispensed by the fluid apertures 1103 formed into the hub 802. Although various rinsing solutions suitable for semiconductor processing are contemplated within the scope of the invention, DI is an exemplary rinsing solution that may be dispensed onto the substrate in order to rinse the surface thereof. Further, and since the substrate is rotating during the process of dispensing the rinsing fluid thereon, the fluid is generally urged radially outward toward the perimeter of the substrate. In this

base members 608 are generally manufactured from a metal having desirable thermal conductivity properties, such as aluminum, for example. Additionally, the three sections of the plate 402 may be brazed together to form a unitary heat transferring plate 402. The lower portion of the plate 402, i.e., the bottom of the base member 608, includes a stem 606 that supports the plate 402. The ~~stem~~ stem is generally of a substantially smaller diameter than the plate member 402, which minimizes thermal transfer to the chamber base or walls. More particularly, the stem member generally has a diameter of less than about 20% of the diameter of the heating plate 402. Additionally, the lower portion of the stem 606 includes a thermocouple 604 for measuring the temperature of the heating plate 402 and a power connection 602 to conduct electrical power to the heating element 600.

[00~~70~~60] The annealing chamber 302 includes a substrate transfer mechanism actuator assembly 418 that is in communication with the robot 406. The actuator 418 is generally configured to ~~control both~~ control both pivotal movement of the blade 408, as well as the height or Z position of the blade relative to the heating or cooling member. An access door 414, which may be a slit valve-type door, for example, is generally positioned in an outer wall of the body portion 401. The access door 414 is generally configured to open and allow access into the processing volume 400 of the annealing chamber 302. As such, access door 412 may be opened and a robot 412 (which may be robot 132 from the exemplary FI or the exemplary mainframe substrates transfer robot 120 illustrated in FIG. 1, for example) may enter into the processing volume 400 to drop off or retrieve a substrate from one of the annealing chambers 302. CH 2/20/07

[00~~77~~67] FIG. 8 illustrates a partial perspective and sectional view of an exemplary substrate spin rinse, dry cell 800 of the invention. The spin rinse dry cell 800 (SRD) includes a fluid bowl/body 801 supported on a frame that may be attached to a plating system, such as the mainframe 113 illustrated in FIG. 1. The SRD 800 further includes a rotatable hub 802 centrally positioned in the fluid bowl 801. Hub 802 includes a generally planar upper surface that has a plurality of backside fluid dispensing nozzles 808 formed thereon and at least one gas dispensing nozzle 810 formed thereon (also shown in FIG. 5 as nozzles 503). A plurality of upstanding substrate support fingers 803 CH 2/20/07

the same system as mainframe 113, but may not be in direct contact with the mainframe 113 or accessible from the mainframe robot 120. For example, as illustrated in FIG. 1, the anneal station 135 may be positioned in direct communication with the link tunnel 115, which allows for access to mainframe 113, and as such, the anneal chamber 135 is illustrated as being in communication with the mainframe 113.

57

[00~~67~~] The heating plate 402, in similar fashion to the cooling plate 404, also includes a substantially planar upper substrate support surface. The substrate support surface includes a plurality ~~a~~ of vacuum ~~apertures.422~~ apertures 422 formed therein, each of the vacuum apertures 422 being selectively in fluid communication with a vacuum source (not shown). As such, the vacuum apertures 422 may be used to vacuum chuck or secure a substrate to the heating plate 402 for processing. The interior of the heating ~~plate.~~ plate 402 includes a heating element (not shown), wherein the heating element is configured to heat the surface of the heating plate 402 to a temperature of between about ~~100.degree. C~~. 100°C to about ~~600.degree. C~~ 500°C. The heating element may include, for example, an electrically driven resistive element or a hot fluid conduit formed into the heating plate 402, wherein the hot fluid is also configured to heat the surface of the heating plate 402. Alternatively, the annealing chambers of the invention may utilize an external heating device, such as lamps, inductive heaters, or resistive elements, positioned above or below the heating plate 402. Further, as noted above, the heating plate 402 includes a plurality of notches 416 formed into the perimeter of the plate 402, wherein the notches 416 are spaced to receive the tabs 410 of the substrate support blade 408 when the blade is lowered into a processing position.

CH 2/20/07

58

[00~~68~~] FIG. 6 illustrates a perspective view with a partial sectional view of the heating plate 402. The sectional view of plate 402 illustrates a heating plate base member 608 that has a resistive heating element 600 positioned thereon. The resistive heating element is encased in the interior portion 610 of the heating plate 402, as illustrated in FIG. 7. More particularly, the interior portion 610 includes a channel formed therethrough, wherein the channel is sized and spaced to receive the heating element 600. A top plate 612 is positioned above the interior portion 610. The top, interior, and

CH 2/20/07

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IN THE SPECIFICATION:

CH 2/20/07

Please replace paragraphs [00~~13~~]3, ~~[0055],~~ [00~~58~~]48, [00~~67~~]57, [00~~68~~]58, [00~~77~~]67, and [00~~88~~]78 with the following amended paragraphs.

CH 2/20/07

[00~~13~~]3 Metallization of sub-quarter micron sized features is a foundational technology for[[,]] present and future generations of integrated circuit manufacturing processes. More particularly, in devices such as ultra large scale integration-type devices, i.e., devices having integrated circuits with more than a million logic gates, the multilevel interconnects that lie at the heart of these devices are generally formed by filling high aspect ratio, i.e., greater than about 4:1, interconnect features with a conductive material, such as copper. Conventionally, deposition techniques such as chemical vapor deposition (CVD) and physical vapor deposition (PVD) have been used to fill these interconnect features. However, as the interconnect sizes decrease and aspect ratios increase, void-free interconnect feature fill via conventional metallization techniques[[,]] becomes increasingly difficult. Therefore, plating techniques, i.e., electrochemical plating (ECP) and electroless plating, have emerged as promising processes for void free filling of sub-quarter micron sized high aspect ratio interconnect features in integrated circuit manufacturing processes.

CH 2/20/07

[00~~58~~]48 The anneal station 135, which ~~Will~~ will be further discussed herein, generally includes a two position annealing chamber, wherein a cooling plate/position 136 and a heating plate/position 137 are positioned adjacently with a substrate transfer robot 140 positioned proximate thereto, e.g., between the two stations. The robot 140 is generally configured to move substrates between the respective heating 137 and cooling plates 136. Further, although the anneal chamber 135 is illustrated as being positioned such that it is accessed from the link tunnel 115, embodiments of the invention are not limited to any particular configuration or placement. As such, the anneal station 135 may be positioned in direct communication with the mainframe 113, i.e., accessed by mainframe robot 120, or alternatively, the annealing station 135 may be position in communication with the mainframe 113, i.e., the annealing station may be positioned on